

# **8-Week Yoga Protocol for Lung Cancer**

Vijai Sharma, PhD

## **Introduction**

**We present a comprehensive yoga program in Viniyoga<sup>1</sup> tradition, which includes Yoga poses (asanas), breathing techniques (pranayama), meditation, mindfulness and relaxation techniques. This protocol was developed by Vijai Sharma in consultation with Gary Kraftsow at the request of Wayne State University, Nursing Department research team for non small lung cancer post treatment patients.**

**Yoga teacher may have to make necessary modifications respecting the health and fitness of the participants in the group.**

**The program consists of two manuals: 1) Participant Manual 2) Teacher Manual. Each manual provides instructions and details of the exercises.**

**Towards the end of each manual, there is a Weekly Self-Care Home Practice table to assist you plan the home yoga practice**

Copyright: Vijai Sharma, PhD 2009

---

<sup>1</sup> Viniyoga, a school of yoga derived from the ancient yogic lineage that specializes in modifying classical yoga techniques for therapeutic needs of individuals.

## Participant Manual

**In the course of this 8- sessions yoga program, we will provide you the following important tools for strength and flexibility, better breathing and some relief for fatigue and insomnia. Tools that can truly nurture the breath, body and mind**

- Pursed-Lip Breathing (PLB) with abdominal breathing to more effectively empty the air out of lungs, reduce shortness/ breathing discomfort during rest and exertion and for reduction of breath related anxiety and stress
- Breath-coordinated exercises (Yoga asanas) for flexibility, strength and breathing efficiency during exercise and exertion
- Slow breathing and improved exhalation-inhalation ratio with yoga breathing exercises (pranayama)
- Mental, physical and breath relaxation, and stress management through such techniques as Quick Relaxation and Relaxed Breathing (Q.R. & R.B.), Breath-Mediated Body Scan,” and “Heart and Lung Tune-up Part I,”
- Mood improvement with “Heart and Lung Tune-up Part II”
- Strengthening of breath awareness and mind body relationship with “Breath-Mediated Mindful Walking.”

### Suggested Use

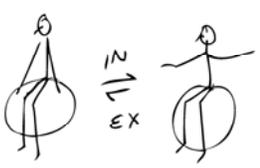
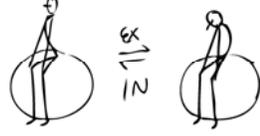
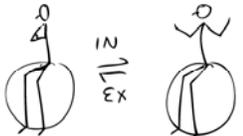
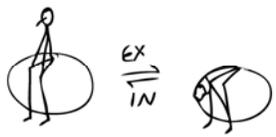
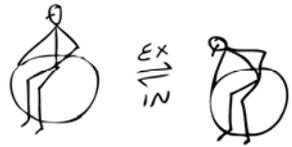
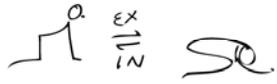
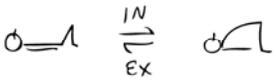
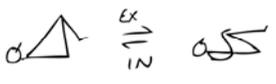
For problems such as insomnia, lack of energy, fatigue, worries, “blues,” some techniques may work better for you than the others. Likewise, you may have instant liking for some and others may “grow” on you as you practice them over and over again. Try them all a few times in order to select the ones that are particularly effective for you. Here is a guideline for your consideration:

- Quick Relaxation and Relaxed Breathing (Q.R. & R.B): Abdominal breathing constantly to ensure correct breathing
- Asana/Pranayama practice: Once a day or more for strength, flexibility, breathing efficiency and stress relief
- Breath-Mediated Body Scan: waking up; bed time; other time for relaxation and stress relief and breathing efficiency
- Heart and Lung “Tune-up” Part I: once a day or more for sleep and relaxation
- Heart and Lung “Tune-up” Part II: once a day or more for mood improvement and emotional and mental relaxation
- Mindful Walking: once a day or more for coordinating breathing with movements and “presence”
- PLB as needed to prevent or control of breathing discomfort/shortness of breath

Note: The 8-Week session is provided on the next page.

NOTE: For all sessions, specific instructions are provided to coordinate the movement with exhalation or inhalation. However, if inhalation during a movement(s) challenges your breathing, you may perform the movement while exhaling.

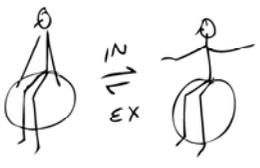
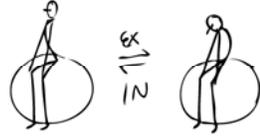
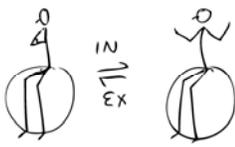
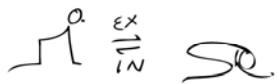
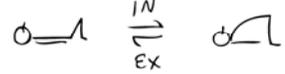
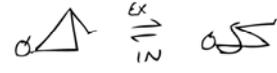
Session 1 - Yoga Class Practice. October 10, 2009

1	PLB/abdominal breathing instructions (seated)	6-12 breaths			
2	Arm raises (seated)	3 x each			
3	Spinal flexes (seated)	6 x			
4	Chest expander (seated)	6 x			
5	Forward bend (seated)	3-6 x			
6	Side bend (seated)	3 x right 3 x left			
7	Cow-child (kneeling)	6 x			
8	Bridge pose (supine)	6 x			
9	Knee to chest (supine)	6 x			
10	Breath-Mediated Body Scan (supine)	4-5 minutes			
11	Savasana (Relaxation Pose)	3-4 minutes			

12	Counted breathing with breath awareness	10 breaths	
----	---	------------	---

Copyright: Vijai Sharma & Gary Kraftsow 2009. Revisions Tracy Flynn 2009.

Session 2 - Yoga Class Practice, October 17, 2009

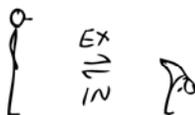
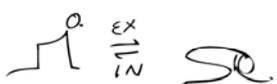
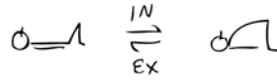
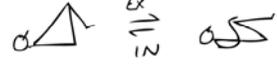
1	PLB/abdominal breathing instructions (seated)	6-12 breaths				
2	Arm raises (seated)	3 x each				
3	Spinal flexes (seated)	6 x				
4	Chest expander (seated)	6 x				
5	Forward bend (seated)	3-6 x				
6	Side bend (seated)	3 x right 3 x left				
7	Cow-child (kneeling)	6 x				
8	Bridge pose (supine)	6 x				
9	Knee to chest (supine)	6 x				
10	Breath-Mediated Body Scan (supine)	4-5 minutes				
11	Savasana (Relaxation Pose)	3-4 minutes				

12	Counted breathing with breath awareness	10 breaths	
----	---	------------	---

Copyright: Vijai Sharma & Gary Kraftsow 2009. Revisions Tracy Flynn 2009.

Session 3 - Yoga Class Practice. October 24, 2009

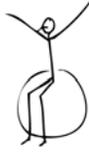
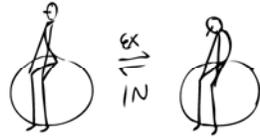
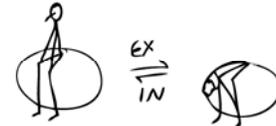
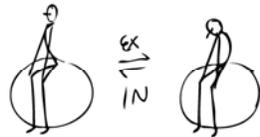
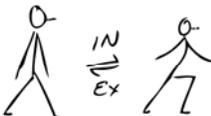
1	<b>Q. R. &amp; R.B. instruction</b> (seated)	6-10 breaths				
2	Arm raises (seated)	3 x each	 3 x 			
3	Spinal flexes (seated)	6 x	 6 x 			
4	Chest expander (seated)	6 x	 6 x 			
5	Forward bend (seated)	3-6 x	 3-6 x 			
6	Side bend (seated)	3 x right 3 x left	 3 x 			
7	<b>Spinal flexes</b> (seated)	6 x	 6 x 			
8	<b>Warrior Pose</b> (standing)	3 x on each leg	 3 x 			
9	<b>Standing pose</b> (standing)	3-6 breaths				

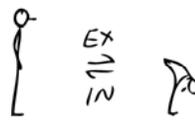
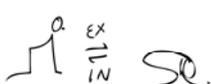
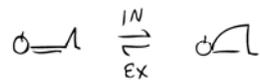
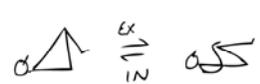
10	<b>Forward bend</b> (standing)	3-6 x	
11	<b>Standing pose</b> (standing)	3-6 breaths	
12	Cow-child (kneeling)	6 x	
13	Bridge pose (supine)	6 x	
14	Knee to chest (supine)	6 x	
15	Breath-Mediated Body Scan (supine)	4-5 minutes	
16	Savasana (Relaxation Pose)	3-4 minutes	
17	<b>Humming breath</b>	6 breaths	
18	<b>Mindful Walking</b>	Introduce	

\* Items in the bold indicate that it was new or changed item from the previous week's protocol

Copyright: Vijai Sharma & Gary Kraftsow 2009. Revisions Tracy Flynn 2009.

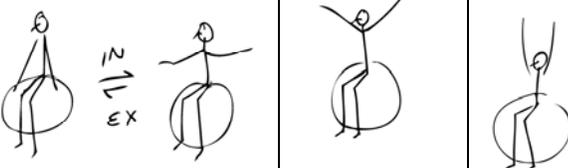
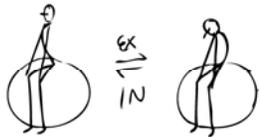
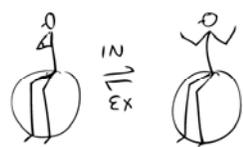
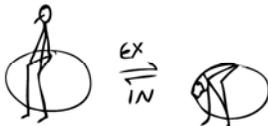
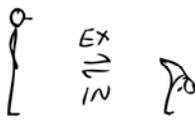
Session 4 - Yoga Class Practice. October 31, 2009

1	Q. R. & R.B. instruction (seated)	6-10 breaths			
2	Arm raises (seated)	3 x each			
3	Spinal flexes (seated)	6 x			
4	Chest expander (seated)	6 x			
5	Forward bend (seated)	3-6 x			
6	Side bend (seated)	3 x right 3 x left			
7	Spinal flexes (seated)	6 x			
8	Warrior Pose (standing)	3 x on each leg			
9	Standing pose (standing)	3-6 breaths after each side of Warrior			

10	Forward bend (standing)	3-6 x	
11	Standing pose (standing)	3-6 breaths	
12	Cow-child (kneeling)	6 x	
13	Bridge pose (supine)	6 x	
14	Knee to chest (supine)	6 x	
15	Breath-Mediated Body Scan (supine)	4-5 minutes	
16	Savasana (Relaxation Pose)	3-4 minutes	
17	Humming breath	6 breaths	

\* Items in the bold indicate that it was new or changed item from the previous week's protocol

Session 5 - Yoga Class Practice. November 7, 2009

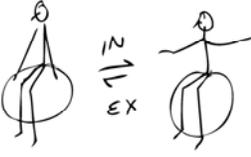
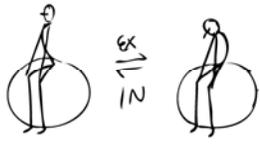
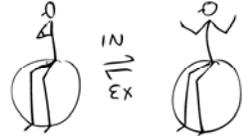
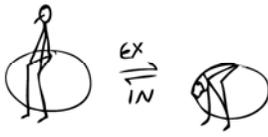
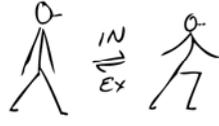
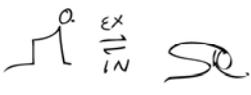
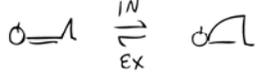
1	Q. R. & R.B. instruction (seated)	6-10 breaths			
2	Arm raises (seated)	3 x each			
3	Spinal flexes (seated)	6 x			
4	Chest expander (seated)	6 x			
5	Forward bend (seated)	3-6 x			
6	<b>Warrior Pose (standing) – higher arms was new</b>	3 x each, each side			
7	Standing pose (standing)	3-6 breaths after each side of Warrior			
8	Forward bend (standing)	3-6 x			
9	Standing pose (standing)	3-6 breaths			

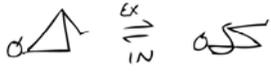
10	<b>Tree</b> (standing)	3-6 breaths	
11	Cow-child (kneeling)	6 x	 $\begin{matrix} \text{EX} \\ \updownarrow \\ \text{IN} \end{matrix}$ 
12	Bridge pose (supine)	6 x	 $\begin{matrix} \text{IN} \\ \updownarrow \\ \text{EX} \end{matrix}$ 
13	Knee to chest (supine)	6 x	 $\begin{matrix} \text{EX} \\ \updownarrow \\ \text{IN} \end{matrix}$ 
14	Breath-Mediated Body Scan (supine)	4-5 minutes	
15	Savasana (Relaxation Pose)	3-4 minutes	
16	<b>Vowel Singing</b>  (seated)	2 x "ahh" 2 x "eee" 2 x "ooo"	
17	Mindful Walking	3-4 minutes	

\* Items in the bold indicate that it was new or changed item from the previous week's protocol

Copyright: Vijai Sharma & Gary Kraftsow 2009. Revisions Tracy Flynn 2009.

Session 6 - Yoga Class Practice. November 14, 2009

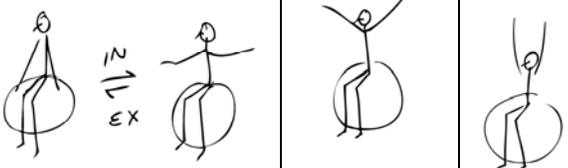
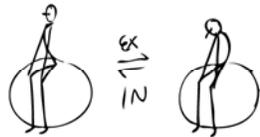
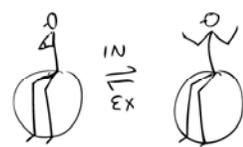
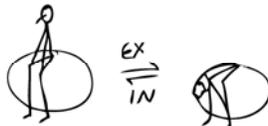
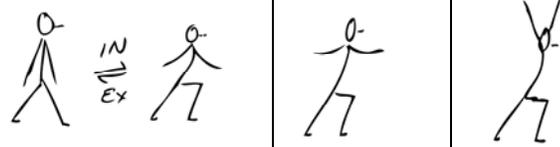
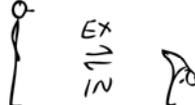
1	Q. R. & R.B. instruction (seated)	6-10 breaths			
2	Arm raises (seated)	3 x each			
3	Spinal flexes (seated)	6 x			
4	Chest expander (seated)	6 x			
5	Forward bend (seated)	3-6 x			
6	Warrior Pose (standing)	3 x each, each side			
7	Standing pose (standing)	3-6 breaths after each side of Warrior			
8	Tree (standing)	3-6 breaths 2 x each side (1 x with hand on chair, 1x without)			
9	Cow-child (kneeling)	6 x			
10	Bridge pose (supine)	6 x			

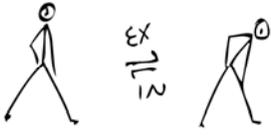
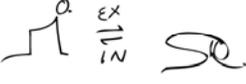
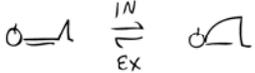
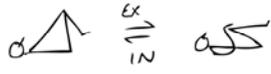
11	Knee to chest (supine)	6 x	
12	Savasana (Relaxation Pose)	3-4 minutes	
13	Vowel Singing (seated)	2 x "ahh" 2 x "eee" 2 x "ooo"	
14	<b>Heart &amp; Lung Tune Up Part I &amp; II (on joy)</b>	5-6 minutes	

\* Items in the bold indicate that it was new or changed item from the previous week's protocol

Copyright: Vijai Sharma & Gary Kraftsow 2009. Revisions Tracy Flynn 2009.

Session 7 - Yoga Class Practice. November 21, 2009

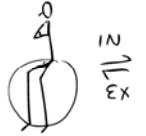
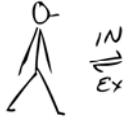
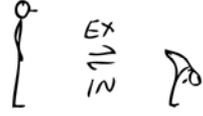
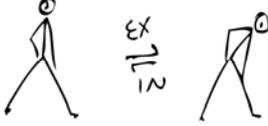
1	Q. R. & R.B. instruction (seated)	6-10 breaths			
2	Arm raises (seated)	3 x each			
3	Spinal flexes (seated)	6 x			
4	Chest expander (seated)	6 x			
5	Forward bend (seated)	3-6 x			
6	<b>Warrior Pose (standing) – highest arms was new</b>	2 x each, each side			
7	Standing pose (standing)	3-6 breaths after each side of Warrior			
8	Forward bend (standing)	3-6 x			
9	Standing pose (standing)	3-6 breaths			

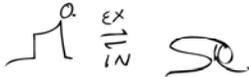
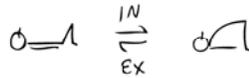
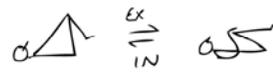
10	<b>Triangle</b> (standing)	3 x each side	
11	Cow-child (kneeling)	6 x	
12	Bridge pose (supine)	6 x	
13	Knee to chest (supine)	6 x	
14	Savasana (Relaxation Pose)	3-4 minutes	
15	Humming breath	6 breaths	
16	Heart & Lung Tune Up Part I & II (on joy)	5-6 minutes	

\* Items in the bold indicate that it was new or changed item from the previous week's protocol

Copyright: Vijai Sharma & Gary Kraftsow 2009. Revisions Tracy Flynn 2009.

Session 8 - Yoga Class Practice. November 28, 2009

1	Q. R. & R.B. instruction (seated)	6-10 breaths			
2	Arm raises (seated)	3 x each			
3	Spinal flexes (seated)	6 x			
4	Chest expander (seated)	6 x			
5	Forward bend (seated)	3-6 x			
6	Warrior Pose (standing)	2 x each, each side			
7	Standing pose (standing)	3-6 breaths after each side of Warrior			
8	Forward bend (standing)	3-6 x			
9	Triangle (standing)	3 x each side			

10	Cow-child (kneeling)	6 x	
11	Bridge pose (supine)	6 x	
12	Knee to chest (supine)	6 x	
13	Savasana (Relaxation Pose)	3-4 minutes	
14	Vowel Singing	2 x "ahh" 2 x "eee" 2 x "ooo"	
15	Heart & Lung Tune Up Part I & II ( <b>on love</b> )	5-6 minutes	

\* Items in the bold indicate that it was new or changed item from the previous week's protocol

Copyright: Vijai Sharma & Gary Kraftsow 2009. Revisions Tracy Flynn 2009.

## **Participants**

### **Breath-Mediated Mindful Walking (5-10 minutes)**

#### **Do mindful walking at least once a day or more for additional benefits**

In nutshell: “Keep the breath in the abdomen and the mind on walking”

Potential Benefit: With mindful walking, you may feel calmer and centered and be able to pace your walking with your breathing. Such pacing between walking and breathing may increase the efficiency of your breathing and improve your stamina for walking.

Mindful walking involves body awareness and breath awareness as you walk. If you experience shortness of breath you may slow your walking in order to control shortness of breath.

Before you start walking, check your breath to make sure you doing abdominal breathing. Do Pursed Lip Breathing, if desired.

Drop any unnecessary tension other than the muscle tension required in order to walk. If you notice excessive tension in any part of the body, relax.

Remember to “blow as you go.” Exhale while slightly pulling in your abdomen towards the back as you walk. The moment you begin to notice breath shifting from abdomen to upper chest, slow the pace of walking. Regulate your breath. Do PLB if desired or rest for a while.

Don't compete with yourself or anyone else. It does not matter how FAR you walk but how LONG you walk and how WELL you breathe during your walk in spite of the breathing challenge you face.

**Copyright: Vijai Sharma, PhD 2009**

## Participants

### Pursed-Lip Breathing (PLB)

- “Imagine smelling a rose (Inhaling slowly) blowing at the candle like you are bending or flickering the flame but not so forcefully as to put out the candle. Imagine blowing softly, gently and slowly.” If possible, exhale while gently contracting your belly towards the back
- “Relax your shoulders and neck.”
- “Pucker your lips as if you were going to whistle or kiss a baby.”
- “Softly, VERY GENTLY, and s-l-o-w-w-ly breathe out through the pursed lips. If possible, breathe out through both sides of the lips.”
- “Breathe in slowly through your nose.”
- Do not force air out of your lungs.
- Blow out the breath softly.” “Make your exhalation longer than inhalation. However, increase the length of exhalation gradually. Exhaling longer than your capacity could make the next breath jerky. If your breathing gets agitated, take a break.

### PLB with Abdominal Breathing

Now you know how to do PLB and you also know how to do abdominal breathing. PLB combined with very gentle contraction of abdominal muscles can be even more effective. Follow these instructions:

“Slightly, very gently, pull in the navel towards the back, purse your lips and start exhaling slowly with a gentle and consistent pressure. Do not exert or forcibly contract the abdominal muscles as that can tire you out quickly. Just a mild “suggestion” to the abdominal muscles for gently pulling in the navel towards the back is good.

### **PLB with inhalation-exhalation ratio (desirable for some people)**

Count in your head as you inhale and exhale so you can keep track of the length of breath. Always breathe slowly and softly.

When possible, breathe in through the nose and breathe out through the pursed lips.

The ratio of inhaling to a count of 4 and exhaling to a count of 6 is good for most of the time. However, if lungs are hyper inflated, you may gradually make your exhalation twice longer than inhalation. For example, if possible, inhale to a count of 5 and exhale to a count of 10.

Don't try to inhale longer than exhale!

## Participants

### Quick Relaxation and Relaxed Breathing ((Q.R. & R.B.) 6-10 breaths

#### Introduction:

You may try it for quick relaxation and to restore relaxed abdominal breathing. If you are tense breathing becomes worse. It is important to quickly relax especially the face, neck and shoulders and restore do relaxed abdominal breathing. This can also help with shortness of breath and any other breathing discomfort you may have.

**Q.R. & R.B: “Face relaxed! Neck and shoulders relaxed! Body relaxed! Hand on abdomen! Abdominal breathing!**

**Take 6-10 breaths in this manner!**

Participants

**Breath-Mediated Body Scan (4-5 minutes)**

**Introduction:** You may use it for relaxation, stress management, insomnia and fatigue. When to do it? Waking up; going to bed; at night when sleep is interrupted and other times when deeper relaxation and/or slow, smooth breathing is desired.

**Instructions:** Simply exhale and relax the part of the body I say. As you exhale, make that part of the body real loose and relaxed!”

“Exhale and relax the forehead and the eyes

The nose and the mouth

Entire face

The neck and the throat

Exhale and relax both shoulders and shoulder blades

Entire right arm including the finger tips

Entire left arm including the finger tips

Exhale and relax the chest

Abdomen and the pelvis

Right leg from hips to toes

Left leg from hips to toes

Exhale and relax the entire right side of the body

Entire left side of body

Exhale and relax the lower body

The upper body

The front of the body

The back of the body

Exhale and relax the inside of the body

The outside of the body

Exhale and relax the entire body!

Become aware of the whole body. Whole body awareness from toes to head and head to toes!

As you breathe in and out, be aware of the whole body, toes to top and top to toes! Hands to the head and head to the hands!”

**To end the Body Scan Practice:** Become aware of your surroundings. In your mind’s eyes, see the room where you are lying down. Close and open your fists. Squeeze and spread your toes. Gently open your eyes. Turn on your preferred side and prepare to get up slowly.”

Alternate instruction for Breath-Mediated Body Scan: “Inhale and become aware of the part of the body I say. Then exhale and relax that part of the body. For example, when you hear, “The forehead and the eyes,” inhale and scan the forehead and the eyes. Then exhale and relax the forehead and the eyes. Continue with the rest of the body parts in that manner.

**Copyright: Vijai Sharma, PhD 2009**

## **Participants**

### **Heart and Lungs "Tune-Up" Part I (1-2 minutes)**

**Introduction:** Heart and Lung Tune up is a “tonic” for the lungs and the heart, and a tool for relaxation, stress management, better sleep and relief from fatigue. Heart and Lung Tune Up Part I can be done with or without the Part II

**Starting Position:** lying down or sitting on the chair or the floor.

If you lie down, keep a pillow under your head. If you sit in a chair, sit a little forward on the seat, keeping head, neck and trunk in a straight line. If you sit on the floor, keep a folded blanket under your sitting bones and keep head, neck and trunk straight.

### **Technique**

1. Leave the whole body loose and relaxed.
2. As you INHALE, imagine as if the breath is entering through the crown of the head and going down into the heart center. While inhaling, say to yourself silently, “Calm”
3. As you EXHALE, relax the body even more loose and relaxed while imagining the breath is exiting from the heart center all the way down and out through the toes and the soles of the feet. While exhaling, say to yourself, silently, “Relaxed.” With each exhalation, let the body become even more loose and relaxed.

Take 6-10 breaths in this manner. If you wish, you may continue doing it longer.

Note: If you wish, you may go on to do “Heart and Lungs Tune up Part II

. **Copyright: Vijai Sharma, PhD 2009**

## Participants

### Heart and Lungs "Tune-Up" Part II (5-6 minutes)

**Introduction** In the Heart and Lungs Part II, we select a positive emotion such as joy, love, compassion, gratitude, etc. and experience it as fully and vividly as we can.

Why do it? Heart and Lungs Part II is a mood improver. It will take you out of negative mood into a positive mood and feeling and work as a tonic to you're your spirits. It is not only a "tonic" for your feeling heart but also a tool for breath relaxation and stress management. Experience it!

When to do the Heart and Lungs Part II? After you have done Heart and Lungs "Tune-Up" for a few breaths in which you have inhaled as if through the crown of the head into the heart center and exhaled out from the heart center through the toes. With each exhalation, you have let the body become even more loose and relaxed.

#### **Technique—Feeling the emotion of joy**

"Your breathing is becoming smooth, slow and quiet. For the purpose of this exercise, feel that you are totally content and at peace. There is nothing more you want in the moment. You feel a sense of gratitude for what you have.

Start inhaling and exhaling from the heart center. Feel your heart is breathing in and out in a relaxed manner. Your heart gently "opens" up with the in-breath and relaxes with the out-breath. Let that smile from the heart flow to the eyes. Smile with your eyes and face. Notice when you smile with your eyes, how they brighten up! Perhaps, you may recall a specific time and place when you felt immensely joyful. Were you by yourself or with someone when you felt happy and joyful? Were those moments of happy conversations, smiling faces, laughter or tears of joy? Experience it all over again with the same intensity now!

Let the feeling of joy from the heart and the eyes flow over into the rest of the body. Feel the feeling of joy in the whole body!" (here, pause for 1 minute)

**To end the practice:** "Become aware of your surroundings. In your mind's eyes, see the room where you are lying down. Close and open your fists. Squeeze and spread your toes. Gently open your eyes. Turn on your preferred side and prepare to get up slowly."

---

#### **You may choose other positive emotions. Here are two more examples:**

---

**Feeling love:** "You may choose to experience love for your partner, sibling, friend, child, or the love for everyone, the love for humanity or God. Having established relaxed heart-breathing, feel the emotion of love in your heart! Perhaps your heart softens and opens up when you vividly experience the changes in the body and the heart when you experience love. Recall a specific time, place and person when you felt the love in your heart. Re-experience that love in this moment. What were all the feelings you were feeling towards the person you intensely loved? Was there happiness, joy, sensation of thrill, an emotional high or some feelings along those lines? Let the love feeling from the heart flow over to the face and the whole body.

**Feeling compassion:** Imagine a person who is less fortunate than you are, or has less than you do. Perhaps, this person is very sick and needs your help. Having established the relaxed heart breathing, bring that person in your heart. See yourself helping that person with such things as cooking, giving medicine, pushing the wheelchair, bringing flowers or doing another act of compassion and help. Feel the kindness and compassion and the joy of helping that person.

**Copyright: Vijai Sharma, PhD 2009**

## **Participants**

### **Relaxation Pose (Shavasana) 3-4 minutes**

Intention—Whether sitting or lying down, find the most comfortable position in which you can be still and comfortable for 3-4 minutes. Lie down and be still. Observe your breathing. Let the breathing become slow and smooth without trying to change it.

## Teacher Manual

Teacher Manual consists of the following:

### A- Handouts to be given to the Participants

- Quick Relaxation (Q.R.) and Relaxed Breathing (R.B.)
- Pursed-Lip Breathing (PLB)
- Breath-Mediated Body Scan
- Heart and Lung “Tune-up” Part I
- Heart and Lung “Tune-up” Part II
- Breath-Mediated Mindful Walking

### B- Audio Tape/CD to be recorded by the teacher in his/her voice for participants’ use

- Breath-Mediated Body Scan
- Heart and Lung “Tune-up” Part I
- Heart and Lung “Tune-up” Part II
- Breath-Mediated Mindful Walking

### C- Detailed instructions for all exercises to be performed by the participants.

Teacher

### **Quick Relaxation and Relaxed Breathing (Q.R. & R.B.)**

#### **Introduction:**

Breathing discomfort makes us tense and tension makes the breathing worse. Physical and mental relaxation can improve our breathing. It is important that we learn to relax quickly especially the face, neck and shoulders and do relaxed abdominal breathing. This can also help with shortness of breath and any other breathing discomfort you may have.

Here are the instructions that may be given at the first session. Thereafter, brief instructions may be given for subsequent session.

#### **Quick Relaxation (Q.R)**

“Relax your entire face. Relax your throat and neck. Relax your shoulders and shoulder blades. Relax your entire right arm. Relax your entire left arm. Relax your chest. Relax your abdomen and pelvis. Relax your entire right leg. Relax your entire left leg. Relax the whole body.

#### **Relaxed Breathing (R.B.)**

Relaxed breathing is abdominal breathing with neck and shoulders relaxed. Keep your neck and shoulders relaxed.

“Put your one hand on chest and the other one on your abdomen. Let your abdomen become soft and relaxed. Neck and shoulder remain quiet and relaxed as much as possible. As you inhale the hand on the chest remains moves as little as possible and the hand on abdomen moves up (or outwards, if sitting). As you exhale, the abdomen contracts and the hand on the abdomen is pulled in towards the spine. Breathe softly and slowly. This is abdominal breathing. Keep the upper chest and abdomen relaxed as you breathe in and out.”

**Brief instructions for the subsequent sessions: “Face relaxed! Neck and shoulders relaxed! Body relaxed! Hand on abdomen! Abdominal breathing! Take 6-10 breaths in this manner!”**

Teacher

#### **Additional Notes on Asana-Pranayama Tables**

Breath-Mediated Mindful Walking: Instructions and actual practice for the Breath-Mediated Mindful Walking is conducted prior to the beginning of the asana pranyama class.

PLB: Detailed instructions are provided in the 1<sup>st</sup> session. Further refinement of the skill may be needed in the subsequent sessions

Spinal Warm-Up (spinal elongation; FB; BB; LB; Twist with arm movements): Intention: For those, who can't get on the floor totally or can't use supine or prone position due to diaphragmatic issues, may at least be able to move their spine in the five directions with coordinated breathing. For others, it would be a nice warm up for subsequent asanas. It is a safe way to start the first class to allow the yoga instructor some time to know everyone's fitness level and specific physical-structural issues.

Quick Relaxation and Relaxed Breathing (Q.R. & R.B.): Detailed instructions are provided in the 2<sup>nd</sup> session. Brief instructions and refinement of the skill is provided from session 3 to 8

Forward Bend/PLB: To be used as per teacher's discretion anywhere between session 2 to 8 or deleted altogether

#### **Pranayama: Counted Breathing; Humming Breath; Vowel Singing**

Note: These three ancient pranayama (yoga breathing techniques) are for expiration prolongation, that is, they can increase the length of your exhalation which can also help to slow the breathing and increase the efficiency of both inhalation and exhalation.

You do not have to do all three at one time. You may do just one or two of them. You do not have to do each one for 6-10 times. You may want to do just 3 or more of one, two or all three of the breathing techniques.

**(Sitting) Counted Breathing (6-10 breaths):** Each time as you exhale, count the silently in your head the serial number of exhalation.

Example: While exhaling softly and slowly, say silently "One." Inhale slowly and smoothly. While exhaling softly and slowly next time, say silently "Two." Inhale slowly and smoothly. While taking next exhalation softly and slowly, say silently "Three." In this manner, go on silently counting the number of exhalation. Inhale slowly and smoothly.

**(Sitting) Humming Breath (6-10 breaths):** In a seated position, press the tip of your tongue against the hard palate and make a soft humming sound such as "hummm....." As you begin to approach the end of your exhalation, exhale without the humming sound. Each time, inhale slowly and smoothly.

Optional--Instead of producing humming sound of the beetle, if you prefer, you may sing a short line of your favorite song. Again, as you approach the end of your breath, exhale without the humming sound.

**(Sitting) Vowel Singing (6 breaths):** In a seated position, sing the vowels (Ah, EE and OO) slowly and gently. As you begin to approach the end of your breath, exhale softly without the vowel sound.

"Ā Ā Ā Ā ...." 2 x

"EEEE....." 2 x

"0000....." 2 x

Optional: Instead of vowel singing, you may want to do "Om chanting." While saying, softly chant "ommm.." Inhale softly and slowly.

Teacher

#### Form the Habit of Conscious Breathing

As you begin to pay steady attention to your breathing, it will be easier for you to monitor your breathing. Any time you find yourself holding your breath or having a jerky breath, breathing irregular or faster, go back to belly breathing

Pay attention to your breathing. While inhaling move your attention downward and follow the lungs filling, chest expanding horizontally and vertically and the belly bulging out. While exhaling, move your attention upward from abdomen to chest, notice the belly and solar plexus slightly contracting and the breath finally exiting through the nostrils.

Make it a habit to breathe consciously. Conscious breathing can be very beneficial. Develop positive and relaxed awareness of your breathing.

Let me take an example of conscious driving in order to make a point about conscious breathing. While driving, even when you use the cruise, you continue to monitor the road conditions all the time. Likewise, you should monitor your breathing even when you get into the automatic mode of breathing. When you monitor the breath, you can decide when you want to leave your breathing on the "automatic pilot" and when to take charge and regulate your breath with awareness

**Copyright: Vijai Sharma, PhD 2009**

**Teacher**

## **Conscious Breathing/ Relaxed Breathing**

**Vijai Sharma PhD, RYT**

When you physically, mentally and emotionally relax your breathing can be naturally slow, deep and relaxed. Put yourself in a state of relaxation prior to practicing relaxed breathing.

### Signs of relaxed breathing

- Neck and shoulders relaxed
- Belly breathing
- Slow breathing
- Smooth and rhythmical breathing
- Quiet breathing
- No long pauses or jerks between breaths
- Exhalation is equal or longer than inhalation.

### **DURING INHALATION**

Neck and shoulders remain relaxed. As the breath goes downward, the chest expands, the rib cage elevates, diaphragm goes down and the belly comes out. The area between sternum, navel and perineum feels stretched. The upper back widens and the lumbar arch slightly deepens.

### **DURING EXHALATION**

Neck and shoulders remain relaxed. Diaphragm relaxes, chest and ribcage retract to their pre-inhalation size and position, the belly goes in, navel slightly pulled in towards the back and the lumbar arch in the low back slightly flattens.

### Helpful Tips for Relaxed Breathing

- Practice relaxed breathing several times a day for a few minutes at a time
- Schedule several one minute “relaxed breathing moment” during the day, when you quickly relax, focus on your belly or forehead and trigger relaxed breathing
- Learn physical and mental relaxation technique which would also facilitate relaxed breathing

### **ABDOMINAL BREATHING**

Abdominal breathing can be practiced in a seated position or lying down position. If you sit in chair, come forward a little so neck, head and trunk are straight and relaxed.

If you experience trouble breathing while lying down, practice breathing technique while seated in a comfortable position

Of course, breathing is done by lungs, the term “abdominal breathing” is used to remind us that we should focus on the abdominal movement during the breathing. Abdomen expands during inhalation and contracts during exhalation. When you inhale, diaphragm pushes down and with that it pushes down the abdominal organs and as a result of this action, the abdomen bulges out. When you exhale, diaphragm relaxes and goes up. With such diaphragmatic action, abdomen contracts, the abdominal organs which were pushed down come back up and you notice that the abdominal wall pulls in towards the back.

**In nutshell, in order to do abdominal breathing, pull the abdomen in towards the back while exhaling and let the abdomen expand while inhaling.**

### **Use the “hand Technique”**

Sit in a quiet place and just settle down for a minute or two. Put your hand, horizontally, about one inch above your navel. Close your eyes. Breathe normally without trying to influence your breathing one way or the other. Observe how your belly moves every time you breathe in and breathe out. If you are breathing correctly, you should find that the hand over the tummy moves out as you breathe in and moves in as you breathe out.

This is called, “abdominal breathing” (or “belly breathing” informally). Abdominal breathing is good but don’t deliberately puff your belly out. Let the belly be relaxed as you inhale.

If upper chest and/or shoulder and neck go up and down as you breathe in and out, let your neck and shoulder relax. When you are sitting quietly and breathing, your neck and shoulders remain still if you are breathing correctly.

Close your eyes again and track your hand on the belly.

Belly should bulge OUT when you breathe IN

Belly should pull IN when you breathe OUT.

#### **Tips for Correcting abdominal Movement**

If the abdomen does not move correctly as for example, abdomen moves in when you inhale, you need to correct it. Here is how:

Take a slow, deep breath in and breathe out slowly and steadily. The next breath will come in automatically, that is without your effort. Your tummy will move outward as you breathe in and move inward as you breathe out.

If your abdomen begins to move incorrectly or not move at all or only chest moves but not abdomen, relax and reestablish correct breathing. Take a deep, slow, easy breath and blow it out, slowly and steadily. Do it as many times as you need to. Abdomen will begin to move correctly with a few repetition unless there is a structural problem.

Abdominal and relaxed breathing beneficial for breathing, anxiety and depression

#### **Abdominal Breathing**

When you breathe in, abdomen expands and protrudes.

When you breathe out, abdomen pulls in towards the back.

While breathing in, observe the descending diaphragm and expanding lower ribs and abdomen

During exhalation, observe the diaphragm ascending and abdomen contracting and pulling in towards the back.

Pay gentle attention to this process and not get frustrated if it does not happen right away as described here.

In case of relatively flattened diaphragm and shortened intercostals (true for many people with COPD), gently contract the abdomen and lower ribs during exhalation. By doing so during exhalations helps your diaphragm to move upward and empty the lungs more efficiently.

During inhalation, as the diaphragm moves down, simply allow the abdomen and lower ribs to expand.

**Copyright: Vijai Sharma, PhD 2009**

**Teacher**

### **Pursed Lip Breathing for Shortness of Breath**

**Vijai Sharma PhD, RYT**

Pursed -Lip Breathing (PLB) is one of the most helpful things you can do when you are feeling breathless. PLB helps to keep the breathing tubes (bronchi) open and maintain right pressure in those tiny, tiny air sacs. Furthermore, mouth is closer to lungs than the nose is, so it's easier to blow the breath out through the mouth.

#### **Benefits of PLB**

1. Reduces breathlessness
2. Slows the breathing rate
3. Lengthens the exhalation
4. Helps to empty the stale air out of the lungs
5. Increases the size of your breath volume

Set a goal to breathe consciously for most part of your waking hours. If you experience any breathing problem or irregularity in your breathing, start practicing PLB. Your continued breath awareness and monitoring will prompt you at the earliest sign of irregular breathing. The moment you notice the first sign, start practicing PLB to regulate your breathing.

#### **Instructions for PLB**

Relax! Lean slightly forward and s-l-o-w-l-y blow out through pursed lips as if gently blowing a kiss at someone or cooling the hot soup in the spoon for the baby, gently and steadily. If possible, exhale while gently contracting your belly towards the back.

You may breathe in through the nose, if possible, and breathe out through the pursed lips. The action of leaning slightly forward and blowing out against pursed lips encourages the contraction of abdominal muscles, thereby forcing the diaphragm upward to empty the lungs more completely.

People with COPD tend to cut short exhalation in a hurry and rush to swallow more air, which can make breathlessness even worse. PLB slows down exhalation and assists with the action of emptying the lungs and may also help strengthen the breathing muscles.

Lengthen your exhalation. Silent counting while exhaling and inhaling can help. To begin with, you may inhale for a count of three or four, and exhale for the same count. As you progress and the breath stabilizes, you may lengthen the exhalation to a count of six or eight. An ideal ratio for the length of inhalation to exhalation for some people is 1: 1.1/2 and for some it is 1:2

#### **Remember about the length of inhalation and exhalation**

It is generally better to exhale longer than inhale

Under some situations such as when breath is unsettled, if it is not possible to exhale longer than inhale, exhale and inhale for equal length

But, do not inhale longer than you exhale.

#### **Pursed Lip Breathing (PLB)**

1. "Imagine smelling a rose (Inhaling slowly) blowing at the candle like you are bending or flickering the flame but not so forcefully as to put out the candle. Imagine blowing softly, gently and slowly." If possible, exhale while gently contracting your belly towards the back
2. "Relax your shoulders and neck."
3. "Pucker your lips as if you were going to whistle or kiss a baby."  
"Softly, VERY GENTLY, and s-l-o-o-w-w-ly breathe out through the pursed lips. If possible, breathe out through both sides of the lips."
4. "Breathe in slowly through your nose."
5. "Do not force air out of your lungs. Blow out the breath softly."
6. "Make your exhalation longer than inhalation. However, increase the length of exhalation gradually. Exhaling longer than your capacity could make the next breath jerky. If your breathing gets agitated, take a break.
7. Count in your head as you inhale and exhale so you can keep track of the length of breath. Always breathe slowly and softly.
8. When possible, breathe in through the nose and breathe out through the pursed lips.
9. The ratio of inhaling to a count of 4 and exhaling to a count of 6 is good for most of the time. However, if lungs are hyper inflated, you may gradually make your exhalation twice longer than inhalation. For example, if possible, inhale to a count of 5 and exhale to a count of 10.
10. Never try to inhale longer than exhale!

**Copyright: Vijai Sharma, PhD 2009**

Now you know how to do PLB and you also know how to do abdominal breathing. PLB combined with very gentle contraction of abdominal muscles can be even more effective. Follow these instructions:

“Slightly, very gently, pull in the navel towards the back, purse your lips and start exhaling slowly with a gentle and consistent pressure. Do not exert or forcibly contract the abdominal muscles as that can tire you out quickly. Just a mild “suggestion” to the abdominal muscles for gently pulling in the navel towards the back is good.

## Self-Care Home Practice

	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
Abdominal breathing (# of times)							
Asana-Pranayama Practice 1-12) (# of times)							
Body Scan & Whole Body Breathing (# of times)							
Heart and Lung “Tune-Up” (# of times)							
Renewal & Healing: Guided imagery (# of times)							
Heart Meditation							
Mention which emotion e.g. joy, love, compassion, other---							
Mindful Walking (# of times)							
Mindful Moments							
breath, body, eyebrow center, heart, activity, e.g. brushing, cooking, eating, shower--?)							
PLB (# of times needed)							

- **Abdominal Breathing/PLB: Abdominal breathing constantly to ensure correct breathing**
- **Asana/Pranayama practice: Once a day or more for strength, flexibility and stress relief**
- **Body Scan/Whole Body Breathing: waking up; bed time; other time for relaxation and stress relief**
- **Heart and Lung “Tune-up”:** once a day or more for sleep and relaxation
- **Renewal and Healing: Guided imagery: pre-breakfast; other times for energy & mood elevation**
- **Heart meditation: once a day or more for mood improvement and mental relaxation**
- **Mindful Walking: once a day or more for coordinating breathing with movements and “presence”**
- **Mindful Moments: once a day or more for breaking the negative automatic thought pattern**
- **PLB as needed to prevent or control of breathing discomfort/shortness of breath**

Copyright: Vijai Sharma, PhD 2009